

Title (en)
MULTILAYER PIEZOELECTRIC ELEMENT AND EJECTOR USING THIS

Title (de)
MEHRSCHICHTIGES PIEZOELEKTRISCHES ELEMENT UND AUSWURFVORRICHTUNG DAMIT

Title (fr)
ÉLÉMENT PIÉZOÉLECTRIQUE MULTICOUCHE ET ÉJECTEUR UTILISANT CE DERNIER

Publication
EP 1898476 B1 20141119 (EN)

Application
EP 06766780 A 20060615

Priority

- JP 2006312046 W 20060615
- JP 2005175719 A 20050615
- JP 2005188986 A 20050628
- JP 2005283682 A 20050929
- JP 2005283684 A 20050929
- JP 2005313865 A 20051028
- JP 2006089697 A 20060329
- JP 2006089698 A 20060329
- JP 2006152288 A 20060531
- JP 2006152289 A 20060531

Abstract (en)
[origin: EP1898476A1] A multilayer piezoelectric element formed by laying a plurality of piezoelectric layers and metal layers alternately, wherein the plurality of metal layers include a plurality of low-fill metal layers having a fill factor of a metal composing the metal layers lower than that of adjacent, opposite-sides metal layers in the layer direction. In a multilayer piezoelectric element where a plurality of piezoelectric layers and metal layers are laid in layers alternately, the plurality of metal layers include a plurality of thin metal layers having a thickness smaller than that of adjacent, opposite-sides metal layers in the layer direction. In a multilayer piezoelectric element where a plurality of piezoelectric layers and metal layers principally containing an alloy are laid in layers alternately, the plurality of metal layers include a plurality of metal layers having a ratio of one component of the alloy higher than that of adjacent, opposite-sides metal layers in the layer direction.

IPC 8 full level
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Cited by
EP3101912A4; EP1998383A4; EP2003706A4; EP2605299A3; US9005383B2; WO2007097460A1; US10322437B2; US8314535B2; US8022598B2; US8274199B2

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EP 06766780 A 20060615; CN 200680021047 A 20060615; CN 201210155477 A 20060615; JP 2006312046 W 20060615; US 201213728184 A 20121227; US 201213728212 A 20121227; US 91774706 A 20060615